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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,948	03/15/2004	Daniel B. Nielson	2507-6358US(22043-US-01)	2920
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SALT LAKE CITY, UT 84110				
			EXAMINER	
			FELTON, AILEEN BAKER	
			ART UNIT	PAPER NUMBER
			1755	
			MAIL DATE	DELIVERY MODE
			06/14/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/801,948

Applicant(s)

NIELSON ET AL.

Examiner

Aileen B. Felton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,5-8,10-28,30-33 and 35-51 is/are pending in the application.
- 4a) Of the above claim(s) 5-8,10-15,17-24,27,28,30-33 and 35-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,16,25,26,50 and 51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant argues that claim 11 should be rejoined but this is not persuasive.

Applicant originally elected the components of claim 16 as the composition, see the response filed on 4/18/2006.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 25, 26, 50, and 51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 requires that "if the at least one fuel comprises magnesium, the at least one fluoropolymer does not comprise polytetrafluoroethylene and vinylidene fluoride-hexafluoropropylene". There is insufficient basis for this exclusion in the specification.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 25, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Posson et al (6,896,751).

Posson et al discloses a propellant for use in munitions that comprises a 25 % or less of a terpolymer of hexafluoropropylene, vinylidene fluoride, and tetrafluoroethylene (col. 4, lines 5-15). The composition includes a primary fuel from 5-50 % that can be any active fuel and includes metals (col. 4, lines 58-67). Note that all other components are optional since Posson indicates that they "may" be included. Also, note that Posson indicates that even though the method disclosed is useful for the metal/oxidant/polymer pyrotechnic, it may be used to coat metallic particles, thus indicating that there would only be metal particles and polymer (col. 3, lines 40-47). Also, see col. 5, lines 25-30 where Posson indicates that an oxidizing agent "may" be used. The composition is used in a munitions casing and is capable of reacting upon impact.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Posson et al (6,896,751) as applied to claims 1, 25, and 26 above, and further in view of Koch (6,635,130).

Koch teaches the use of hafnium as a fuel with fluoropolymers in a decoy flare (col. 2, lines 43-55).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use hafnium as taught by Koch since Koch indicates that it is a known fuel to use with fluorocarbons and also since Koch indicates its equivalence as a fuel with other metal fuels such as magnesium and aluminum which are the fuels used in Posson.

8. Claims 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Posson et al (6,896,751) in view of Koch as applied to claims 1, 16, 25, and 26 above, and further in view of Posson et al (6,427,599).

Posson et al teaches a reactive composition for use in a decoy flare that comprises magnesium of 60 %, Teflon of 30 %, and Viton of 10 % (col. 28, lines 65-68 and col. 29, lines 1-5). Example 1 discloses pellets from 2.5-95 grams.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the teachings of Posson ('599) with the disclosures of Posson ('751) and Koch since they all relate to similar reactive compositions with fluoropolymers and metals since Posson ('599) teaches that it is known to form these compositions into pellets of a certain weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the parameters of the

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propellant to achieve a desired result. It is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

9. Claims 1, 16, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lucy (4,131,498) in view of Posson et al (6,896,751).

Lucy discloses an incendiary composition that comprises a fluoropolymer from 2-15 % and hafnium (see abstract and col. 4, lines 13-25). The composition is used in a munitions casing and is capable of reacting upon impact. The specific fluoropolymer is not disclosed.

Posson et al discloses a propellant for use in munitions that comprises a 25 % or less of a terpolymer of hexafluoropropylene, vinylidene fluoride, and tetrafluoroethylene (col. 4, lines 5-15). The composition includes a primary fuel from 5-50 % that can be any active fuel and includes metals (col. 4, lines 58-67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the terpolymer taught by Posson with the composition disclosed by Lucy since Lucy discloses that various fluoropolymers may be used with the hafnium metal and since Posson indicates that the terpolymer of hexafluoropropylene, vinylidene fluoride, and tetrafluoroethylene is useful with various metal fuels.

***Response to Arguments***

10. Applicant's arguments filed have been fully considered but they are not persuasive. Applicant's arguments regarding Posson ('751) are not persuasive since Posson indicates that even though the method disclosed is useful for the metal/oxidant/polymer pyrotechnic, it may be used to coat metallic particles, thus indicating that there would only be metal particles and polymer (col. 3, lines 40-47). Also, see col. 5, lines 25-30 where Posson indicates that an oxidizing agent "may" be used.
11. Applicant's other arguments have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aileen B. Felton whose telephone number is 571.272.6875. The examiner can normally be reached on Monday-Friday 6:30-4:00, except alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571.272.1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**AILEEN FELTON**  
**PRIMARY EXAMINER**